


# Engineering

## Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at [www.massbay.edu/uploadedFiles/online.pdf](http://www.massbay.edu/uploadedFiles/online.pdf). Check current course availability at [www.massbay.edu/courses](http://www.massbay.edu/courses)

### DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program is designed to enhance students' interest in the math and science fields by pursuing a career in engineering. The program's core curriculum emphasizes mathematics, physics, and chemistry -- the foundation for all engineering projects. The core curriculum is complemented with courses in engineering design, engineering mechanics, and engineering physics.

Upon successful completion, the Associate in Science Degree in Engineering is awarded.

#### CAREER PATHWAY

Students are advised to select career pathway electives after careful consideration of their career choices in their second year. Some electives may or may not transfer to an engineering program at some four-year institutions

#### Career Pathway Electives:

MN 118 Ethics for Engineers and Technologists  
 EC 201 Principles of Macroeconomics (fall),  
 EC 202 Principles of Microeconomics (spring)  
 (recommended for transferring to UMass Lowell),  
 BI 110 Principles of Biology I (fall)  
 (recommended for transfer to Northeastern University  
 Mechanical Engineering program)

#### Career Pathway Electives:

CS 120 Programming I (fall), CS 200 Programming II (spring), or  
 Computer Science (CS) courses higher than CS 110  
 (for transfer to UMass Lowell for Electrical Engineering/Computer  
 Science double major program)

**Humanities Electives:** Art, Communications, Film, Foreign Language,  
 Humanities, Literature, Music, Oral Communications, Philosophy,  
 Photography, Sign Language, Theater Arts

**Social Science Electives:** Anthropology, Economics, Geography,  
 Government, History, Law & Society (LA 230), Psychology, Sociology

#### PROGRAM FOOTNOTE

Students are advised to check transfer requirements at four year institutions. Some Institutions require 2(two) Chemistry Courses for specific engineering programs. CH 110 and CH 120 sequence is recommended in such cases.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit [www.mass.edu/masstransfer](http://www.mass.edu/masstransfer).

COURSE	COURSE TITLE	CREDITS
<i>First Year Semester 1</i>		
PY 103	Engineering Physics I w/ Lab	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
MN 130	Engineering Design with CAD I	4
		<b>credits:</b>
		15
<i>First Year Semester 2</i>		
PY 104	Engineering Physics II w/ Lab	4
MN 125	Engineering Computation with Application Software	4
EN 102	Freshman English II	3
MA 201	Calculus II	4
CT 100	Critical Thinking	3
		<b>credits:</b>
		18
<i>Second Year Semester 1</i>		
CH 110	Principles of Chemistry I w/ Lab	4
		<b>or</b>
CH 140	Chemistry for Engineers w/ Lab	4
CS 110	Introduction to Computer Science	4
MA 202	Calculus III	4
MN 203	Engineering Mechanics: Statics	3
		3
		<b>credits:</b>
		18
<i>Second Year Semester 2</i>		
MA 211	Differential Equations	4
MN 204	Engineering Mechanics: Dynamics	3
MN 210	Strength of Materials I	4
		<b>or</b>
		3/4
		3
		3
		<b>or</b>
		3
		<b>credits:</b>
		16/17
		<b>Total Credits:</b>
		<b>67/68</b>